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FM 55-55

PARTMENT FIELD MANUAL

SPORTATION CORPS

WAY-OPERATING

BATTALION



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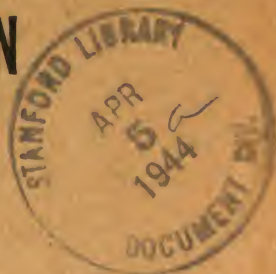
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WAR DEPARTMENT FIELD MANUAL

TRANSPORTATION CORPS

RAILWAY-OPERATING

BATTALION



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WAR DEPARTMENT FIELD MANUAL

FM 55-55

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TRANSPORTATION CORPS

RAILWAY-OPERATING BATTALION



WAR DEPARTMENT • 4 FEBRUARY 1944

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Section 1

General

1. PURPOSE AND SCOPE. **a.** This manual explains the organization and operation of the railway-operating battalion upon a railway operated by the Military Railway Service. Its purpose is to assist military railway officers in the training and operation of their units and to guide command and staff officers charged with their employment. No attempt is made to prescribe employment of railway-operating battalions under all situations. The scheme for organization and employment described is drawn up to fit the general requirements of railway troops operating railway divisions.

b. Since actual conditions which may confront a railway operating battalion vary widely, it is not intended that a literal interpretation of these provisions be made. They should be considered as a guide and exceptions made thereto in the interest of efficient operation. Ultimate responsibility for efficiency of a railway-operating battalion rests upon the battalion commander (division superintendent) who must work out details as to the employment of railway troops as the situation demands.

c. The statement of duties is only for the purpose of showing command relations between various individuals and command responsibility.

d. The word "division" as used herein refers to a railway division and not a tactical division.

2. MISSION. a. The mission of a railway-operating battalion is to operate and maintain a division of a military railway in the theater of operations. It may be required by higher authority to destroy the line over which it is operating.

b. The principal objective for railway troops taking over a new line is immediate movement of supplies and replacements to the front and evacuation therefrom.

3. ORGANIZATION. a. The railway-operating battalion is the basic railway unit. It is normally assigned to a railway division in the communications zone or to a regulating station. For command relations, see paragraph 14.

b. The battalion is so organized that it is capable of taking over the railway activities of the smallest self-contained railway zone, called in civil practice the railway division, which includes the mainline tracks, sidings, terminals, shops, and structures required for coordinated action.

c. A railway-operating battalion is divided into a headquarters, headquarters company, medical detachment, transportation company, maintenance-of-way company, maintenance-of-equipment company, and where the line to be operated is electrified, an electric power transmission company. (See T/O and E 55-225, 55-226, 55-227, 55-228, 55-229, and 55-217.) The transportation company is the basic unit of the battalion. The other companies assist the transportation company in furnishing uninterrupted train service.

4. COOPERATION. Cooperation is essential not only between the various elements of the railway-operating battalion but also between the battalion and the military service in general and the battalion and coordinating agencies. Prompt service, the guiding principle of railway operation, depends upon teamwork. In order to insure team play within the battalion, the battalion commander is placed in direct command of all railway personnel employed on his railway division.

5. WEAPONS. Basic arms of each of the companies of the battalion are the carbine and the rifle. Additional weapons include 50-caliber machine guns and pistols for field grade officers.

6. EQUIPMENT. a. General. The battalion is equipped with organizational equipment and supplies for the office of battalion headquarters and for messing, routine supply, and administration; and with motor transportation for reconnaissance, supervision, messenger service, and routine battalion supply. Its technical equipment includes drafting and reproduction, and special railway tools, machinery, equipment, and supplies issued as required for operation and maintenance of a railway division. When a battalion is assigned a definite task, it may requisition such additional equipment as the situation requires.

b. Cars and locomotives. Railway cars for operations are not assigned to any railway operating battalion or railway grand division, but are moved freely over the entire system as required. Locomotives are normally assigned to a railway grand division for use on the entire grand division.

7. TRANSPORTATION. a. Movement of a railway-operating battalion is by rail, and it is anticipated that their organizational equipment will always be carried in railway cars. Its special railway equipment does not accompany a railway operating battalion when moved except under extraordinary circumstances, in which case it is moved by rail the same as any other special railway equipment.

b. Tables of Equipment show the authorized allowance of motor transportation. Sufficient motor vehicles are provided to permit the supply of units, to provide contact with higher authority and depots within the railway division, and for technical operation of the units.

8. TERMINOLOGY. The relation between positions and their rank of officers of the railway-operating battalion and those of officers of commercial railway systems is given as follows:

COMPANY	DESIGNATION		
	Rank	Military Title	Commercial Railway Title
Headquarters	Lt. Col.-----	Battalion commander---	Division superintendent.
	Major.-----	Second in command (executive officer).	Assistant division superintendent.
	Captain.-----	Supply officer.-----	Division storekeeper.
	Captain.-----	Adjutant.-----	Assistant to division superintendent.
Headquarters	Captain.-----	Company commander---	-----
	1st lieutenant.-----	Commander, train movement section.	Chief dispatcher.
	1st lieutenant.-----	Mess officer.-----	-----
Maintenance of way— Company "A"	Captain.-----	Company commander---	Engineer, maintenance of way (division engineer).
	1st lieutenant.-----	Commander, bridges and building platoon.	Supervisor bridges and building.
	1st lieutenant.-----	Commander, track maintenance platoon.	Track supervisor.
	1st lieutenant.-----	Commander, signal maintenance section.	Signal supervisor.
	2d lieutenant.-----	Assistant to company commander.	Assistant engineer, maintenance of way.
	Captain.-----	Company commander---	Master mechanic.
Maintenance of equipment— Company "B"	1st lieutenant.-----	Commander, locomotive repair platoon.	Engine-house foreman.
	1st lieutenant.-----	Commander, car repair platoon.	General car foreman.
	1st lieutenant.-----	-----	Mechanical engineer.
	2d lieutenant.-----	Assistant to company commander.	Assistant to master mechanic.
	Captain.-----	Company commander---	Trainmaster.
Transportation— Company "C"	1st lieutenant.-----	Commander, headquarters section.	General yardmaster.
	1st lieutenant.-----	Commander, train movement platoon.	Road foreman of engines.
	2d lieutenant.-----	Assistant to company commander.	Assistant to trainmaster.
	Captain.-----	Company commander---	Electrical engineer.
Electric power transmission— Company "D"	1st lieutenant.-----	Commander, electric power platoon.	Electrical engineer.
	2d lieutenant.-----	Commander.-----	General car foreman.
	1st lieutenant.-----	Ambulance train maintenance section.	-----

Section II

Technical Operations

9. POWERS AND LIMITATIONS. **a.** The battalion employed on a railway division is capable of maintaining the normal supply of one field army over a single track standard gauge line.

b. Length of railway division to which a battalion is assigned is determined by higher authority. It depends upon the military situation, friendly or hostile territory, terrain, condition of roadbed and track, grades, terminal facilities, location and length of sidings, communication facilities, nearness to the front, etc. In general, it may be stated that on a single-track railroad, length of a railway division will vary from 90 to 150 miles. If daylight operation of railways adjacent to the front is prohibited, the length of the division may be less than 90 miles.

c. The railway-operating battalion has the necessary personnel to maintain and operate a 50-mile single-track railway division in advance of the regulation station. In a stabilized sector in rear of the regulating station, the battalion is capable of maintaining and operating 70 miles (maximum density of traffic—one train per hour in each direction) without an increase in personnel. Length of the division in a stabilized sector can be increased to 150 miles by attaching one additional maintenance platoon to "A" Company, one additional train operating platoon to "C" Company, and additional specialists such as train dispatchers, telegraph operators, etc., to Headquarters Company.

d. Initial construction of railways as distinguished from maintenance is not the duty of military railway battalions.

Such work is normally the responsibility of the Corps of Engineers, as is the stock piling of construction material and construction equipment required therefor, as may be planned and requested by the Transportation Corps (see AR 55-650).

e. In the occupation of friendly territory or the pacification of conquered areas, full utilization will be made of civilian technical and skilled railway employees, and other available civilian labor in the operation and maintenance of railroad facilities. Such employment must be under the close supervision of military railway personnel, and all necessary safeguards taken to guard against sabotage.

f. Use of military railway operating battalions for work other than maintenance or operation of railways should be avoided. When an unavoidable situation requires their employment on other work they must be provided with suitable transportation and equipment.

10. DISTRIBUTION OF PERSONNEL. **a.** The railway division when operating in advance of the regulating station is normally divided into 10 sections of approximately 5 miles each, and when operating in rear of regulating station or in an area which is not subjected to severe conditions such as frequent bombardments, poor roadbed, etc., 10 sections of approximately 7½ miles or more each. General organization of a railway division in the theater of operations is shown below.

Operating division, theater of operations

Terminal "A"	Station "B"	Station "C"	Station "D"	Station "E"	Terminal "F"
1 2 3 4	1	1 2 3 4	1	1	1 2 3 4

¹ Kitchen for signalmen and trackmen.

² Kitchen for train crews (continuous service).

³ Water tanks.

⁴ Fuel supply.

b. It is impracticable to prescribe any fixed distribution of personnel of the railway-operating battalion due to the

varying conditions under which it operates. This distribution must be left to the practical discretion of the division superintendent (railway-operating battalion commander). As a guide, the following distribution is designed to meet normal requirements:

(1) **TERMINAL "A."** Battalion headquarters and all other personnel not stationed at other locations. Battalion headquarters and shops normally are located at the principal terminal of the railway division.

(2) **STATION "B."**

- 1 sergeant in charge of track maintenance section (maintenance-of-way company).
- 2 corporals, track section foremen (maintenance-of-way company).
- 14 section hands (maintenance-of-way company).
- 3 telegraph operators (headquarters company).
- 1 cook (headquarters company).
- 21 total personnel.

(3) **STATION "C."** Same as Station "B" with the addition of 2 cooks; total personnel, 23.

(4) **STATION "D."** Same as Station "B."

(5) **STATION "E."** Same as Station "B."

(6) **TERMINAL "F."** Personnel at this terminal depend upon the situation. If it is at the end of the line, it will require the same personnel as Station "C" plus such inspectors and emergency repairmen as may be required. Normally it will not exceed 50 men. When the battalion is an intermediate one the activities at Terminal "F" will be performed by the adjacent battalion.

c. Detachments at Stations "B," "C," "D," and "E" are each under the command of a track maintenance sergeant from the maintenance-of-way company. He is responsible for that part of the railroad maintenance work allotted to him, usually from 10 to 15 miles. He is responsible for administration, sanitation, discipline, and mess, and will exercise command in case it is necessary to engage in combat. However, he has no control over technical activities of men who are not assigned to the maintenance-of-way company.

d. As distribution of technical troops is often insufficient

to meet needs of certain specific tasks, economy of personnel must be practiced in railway operations. It may be necessary to modify certain units temporarily by reinforcing them with elements from others. Such measures should be exceptional, since personnel of each company should be kept under orders of its commander in the interest of efficient administration. When it is necessary to increase strength of one unit at the expense of another, subordinate elements under their leaders should be detailed instead of individuals whenever practicable.

11. DEMOLITION. a. Railway-operating battalions may be required by higher authority to destroy railway structures and track. The commander of a railway operating battalion prepares plans for destruction of that part of the line over which he has control. The plan will include details concerning structures to be destroyed and their priorities, computations as to quantities of explosives required for complete demolition, and requisitions for material and supplies.

b. Railway-operating battalions are responsible for prompt withdrawal of rolling stock to prevent confiscation by the enemy. Conditions may arise which make it necessary to risk the possibility of losing rolling stock in order to accomplish an important mission worthy of such risk. In such cases railway personnel cooperate in every way possible with the commanders concerned.

12. ADDITIONAL PERSONNEL. a. Additional personnel may be placed at the disposition of railway-operating battalions for the purpose of increasing the capacity of the railway. Such personnel may be—

- (1) Civilians.
- (2) Engineer troops.
- (3) Troops of other arms and services when engineer troops are not available.

b. Civilians or troop units are assigned to the various departments of the railway in accordance with their needs.

c. Civilians are attached to military railway units and

serve under the officers and noncommissioned officers of these units.

13. RELATION TO OTHER ARMS AND SERVICES. a.

The Transportation Corps arranges with the Signal Corps for the necessary wire circuits for train dispatching and administration of military railways. Such circuits are operated by the Transportation Corps. Construction and maintenance of these circuits are functions of the Signal Corps. Where a wire system is entirely turned over for administration of military railways, it is maintained and operated by the railway operating battalion (AR 55-650).

b. Transportation officers of the Transportation Corps are administrative agents placed at important shipping and receiving points for the purpose of making requisitions on shipping agencies for transportation of men, animals, and materials, and for supervision of loading and unloading. They have no control over operation of trains nor over personnel of the railway services. Movement priorities, when necessary, are determined by higher authority. Requisitions for rolling stock are made by transportation officers, and movements are executed by railway operating personnel.

c. No officer not a part of the railway operating organizations will give any orders to railway operating personnel in the discharge of their duties, or interfere in any way with operation of trains except in case of emergency.

d. (1) Train and engine crews for railway artillery trains passing over a railway division manned by a military railway operating battalion usually are furnished by the transportation company of the railway operating battalion. When train and engine crews are furnished by the railway artillery, pilots are provided by the transportation company of the railway operating battalion over whose trackage the movement is made. On trackage assigned exclusively to railway artillery, all functions pertaining to maintenance and train operation duties are performed by railway artillery troops or attached personnel. Locomotives for railway artillery trains may be furnished by the unit itself or by the railway operating battalion.

(2) Railway artillery trains or engines will not enter upon or foul tracks under Military Railway Service control with-

out permission of the military railway authorities. Military Railway Service trains and engines will not enter upon or foul tracks assigned to railway artillery except under authority of the latter.

(3) Military railway personnel maintain all main track cross-overs and turn-outs leading to railway artillery tracks. Railway artillery troops maintain their own firing and approach tracks from and including the first standard rail joint outside fouling distance from the main track.

e. The railway-operating battalion controls all movements over the trackage assigned to it. This includes schedules, routing, dispatching, and conduct of transportation.

f. Such running and major repairs to rolling stock of other arms as are necessary are performed by military railway personnel (FM 55-60).

g. When a railway-operating battalion operates a division between a regulating station and forward railheads, the division superintendent's office normally is located at the regulating station. If more than one battalion is required, a general superintendent's office may be located at the regulating station. The regulating officer determines shipment priorities in line with the directives of the theater commander. The military railway personnel carry out these priorities.

h. Railways are protected by combat troops located in the zone of operation of the railway. Where a line is subjected to frequent raids, it may be protected by armored trains manned and commanded by personnel from other arms and operated by railway-operating battalion train crews. Movements of armored trains over a railway are special and are governed by tactical considerations, and their priority is specified by higher authority.

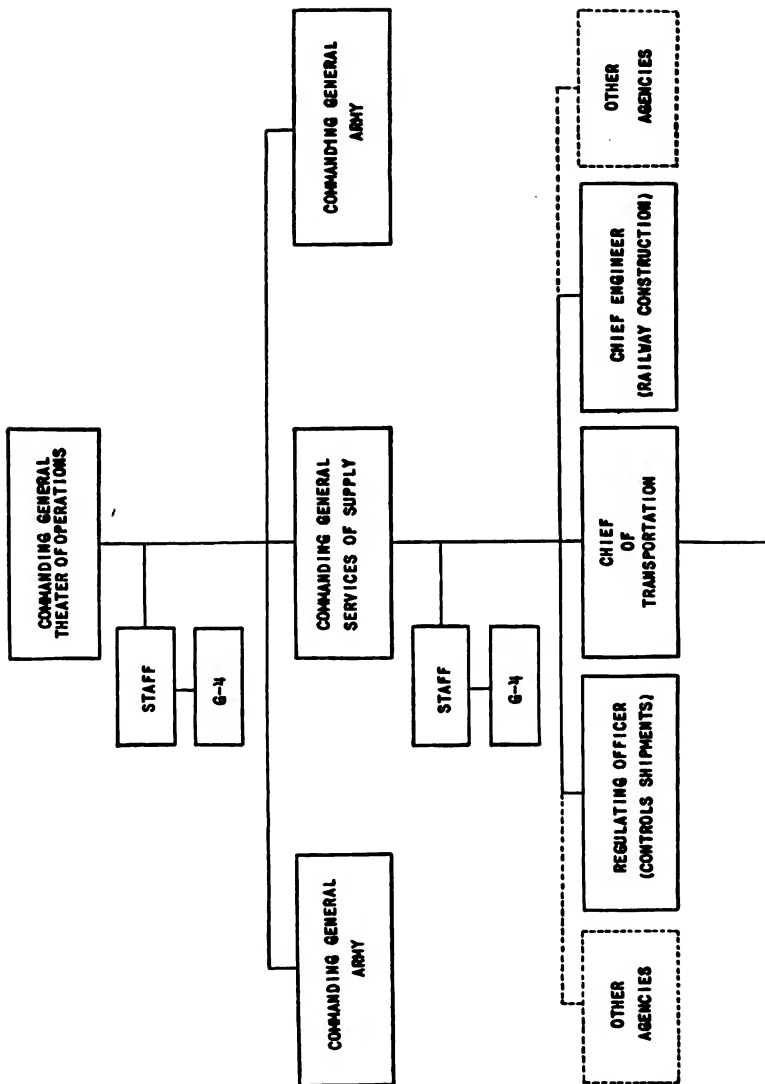
14. COMMAND (fig. 1). a. The service of military railways in the theater of operations is under control of the commanding general, general manager, Military Railway Service. Traffic control on military railways in forward areas is under control of regulating officers through a general superintendent or superintendent. Headquarters and headquarters company, Military Railway Service (see T/O

55-302), provides the general manager with a staff of five departments corresponding with the principal branches of railway operation. It includes an administrative department, a transportation department, a maintenance-of-equipment department, an engineering department, and a stores department. Headquarters, railway grand division (see T/O 55-202) provides the general superintendent with a staff of five sections—administrative, transportation, equipment, engineering, and stores. Chiefs of these sections coordinate actions of all subordinate units with reference to those duties which correspond to their respective staff sections. No section of this staff controls the operation of any unit as such, but each section handles the matters which pertain to it regardless of the unit in which the subject originates. The general manager, Military Railway Service, has under his direction one or more general superintendents, each in charge of a grand division (see FM 55-50 (when published) and fig. 2).

b. Each general superintendent (commanding officer railway grand division) ordinarily has general supervision over two or more railway-operating battalions (T/O 55-225), one railway shop battalion (T/O 55-235), one base depot company (T/O 55-260), and one railway workshop (Mobile), columns 6 and 42 (T/O 55-500).

c. Railway shop battalions, base depot companies, railway workshop, TC (Mobile), and ambulance trains are retained directly under the general manager, Military Railway Service, or assigned to a grand division by direction of the general manager, Military Railway Service. In the absence of a headquarters, Military Railway Service, in any theater of operation, these units will be assigned by the senior Military Railway Service officer in the theater of operations.

d. During a campaign, railway operations are usually of an extremely urgent character. Consequently, in cases where it is impossible to adhere closely to the proper chain of command and communication without entailing dangerous delays, the battalion commander authorizes company or detachment commanders to enter into direct communication with the various higher authorities in order to expedite fulfillment of their missions.



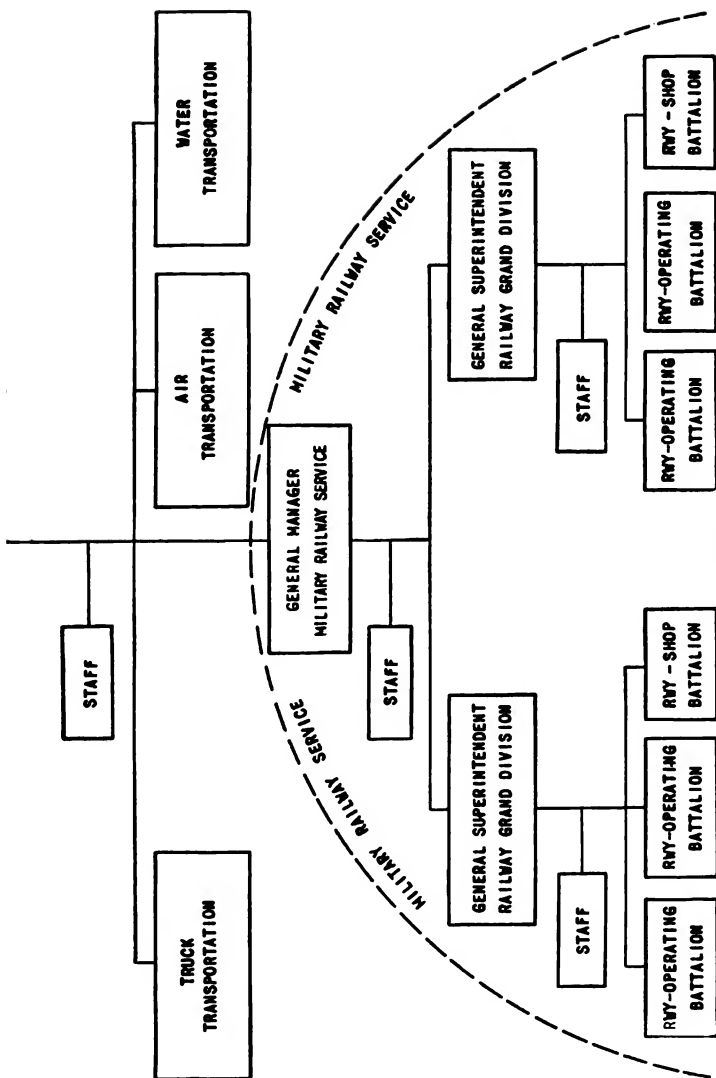
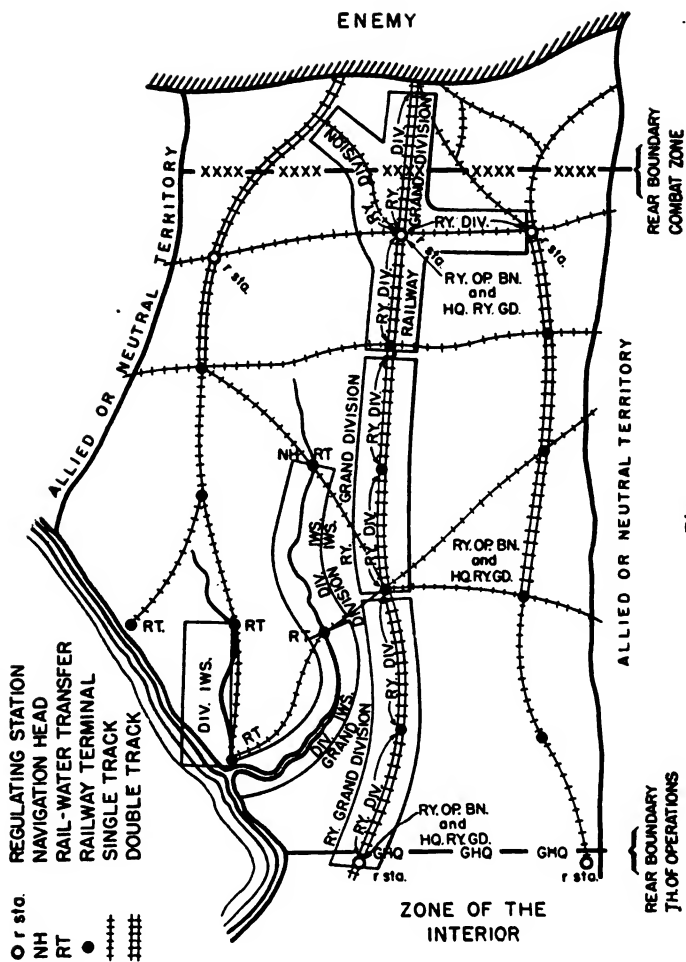


Figure 1



Section III

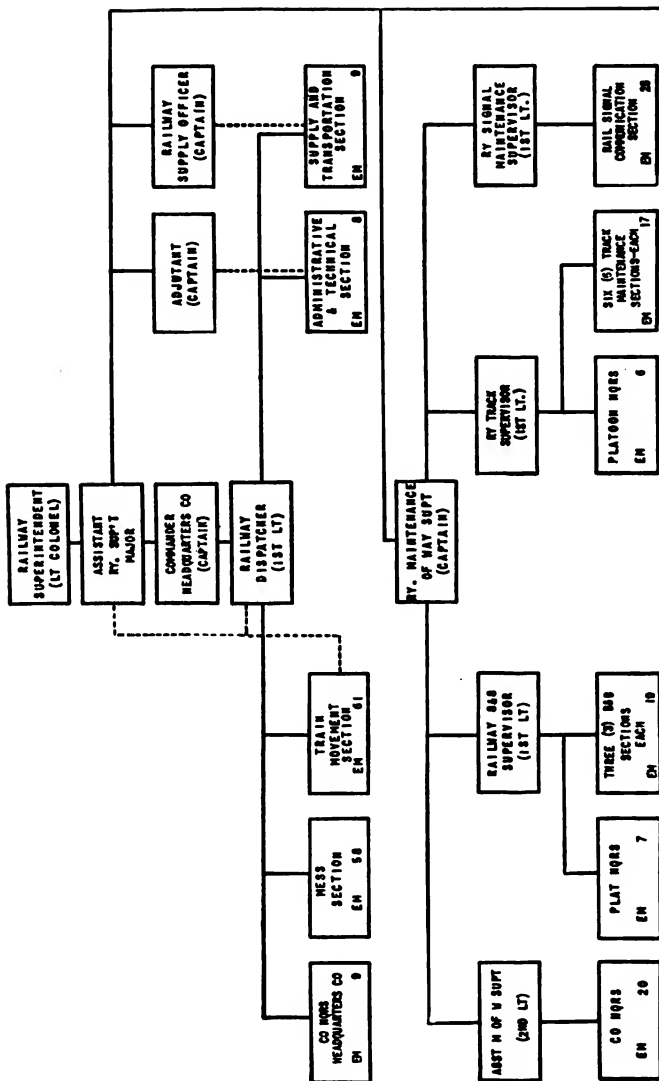
Headquarters and Headquarters Company

15. ORGANIZATION (fig. 3). **a.** Battalion headquarters consists of the battalion commander and his staff.

b. Headquarters company consists of company headquarters and four sections; administration and technical, supply and transportation, mess, and train movement (see T/O 55-226).

16. FUNCTION. The function of the headquarters and headquarters company is to provide technical, administrative, and supply personnel necessary to enable the battalion commander to supervise and coordinate activities of the battalion and to operate certain activities, common to all companies, such as battalion supplies, motor transportation and maintenance, and mess.

17. BATTALION HEADQUARTERS. **a.** The lieutenant colonel commanding the battalion is the division superintendent of the railway division assigned to his battalion. He is responsible for training, discipline, messing, housing, and morale of his troops. He supervises preparation of demolition plans for his division and executes such plans if directed by proper military authority. He makes such reports and keeps such records as may be necessary to insure efficient handling of rolling stock and personnel, and as may be required by higher authority. He should be prepared to make recommendations for increasing the capacity of his



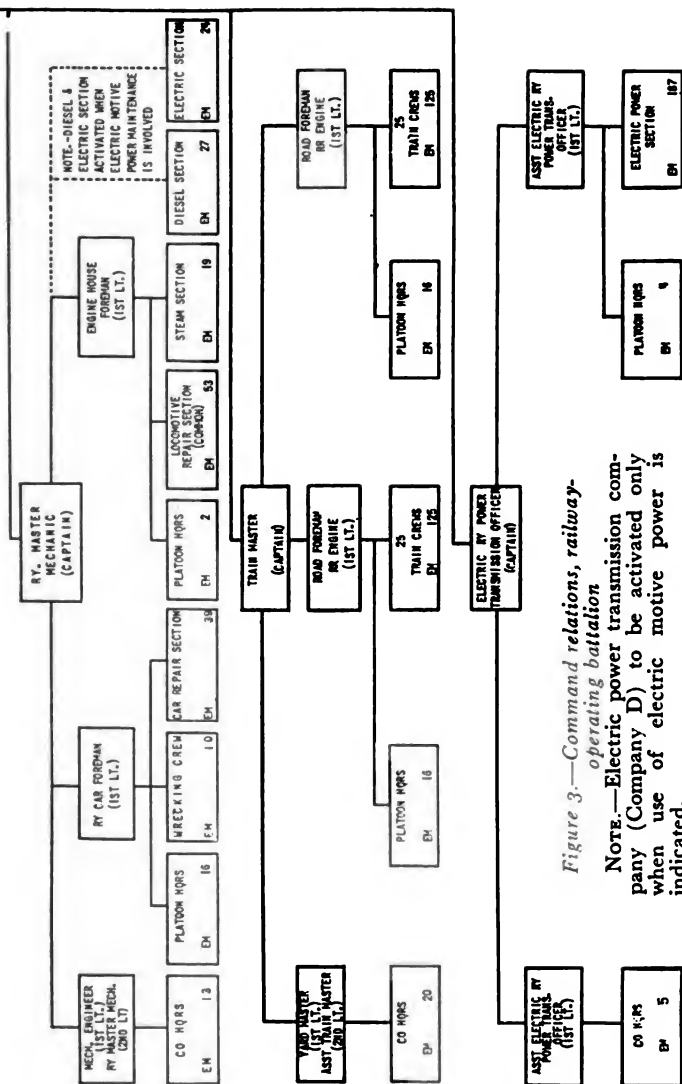


Figure 3.—Command relations, railway-operating battalion

Note.—Electric power transmission company (Company D) to be activated only when use of electric motive power is indicated.

division. When located in the forward area, he should by reconnaissance keep himself informed of conditions which will confront the battalion in case railheads of his division are moved forward. He exercises control through his company commanders.

b. Assistant division superintendent, major, is the executive officer on all matters but is principally concerned with railway administration.

c. Battalion adjutant, captain, is in charge of operation of the administration and technical section of the headquarters company. He is responsible for military administration of the battalion and handles matters relating to personnel, battalion orders, records, police, guard, mail service, and message service. He reports to the division superintendent through the executive officer.

d. Division storekeeper, captain, is battalion supply officer, division storekeeper, and fuel agent. He is in direct charge of the supply and transportation section of headquarters company. As supply officer, he maintains the supply of food, clothing, and ammunition and equipment. As division storekeeper, he coordinates the technical supply requirements of the railway division. He has technical supervision over all of the battalion supply personnel, passes upon requisitions submitted by companies of the battalion, etc.

18. HEADQUARTERS COMPANY. a. Company headquarters.

(1) A captain commands the company. He is battalion and division mess officer and as such operates messes for the battalion at as many locations as may be required. He advises the battalion commander on all matters relating to military training and military employment of the battalion.

(2) First sergeant is in charge of company administration and may be assigned additional duty. The company clerk, corporal, is his clerical assistant.

(3) Basic privates may be used wherever their services are required. The orderly is assigned as needed.

b. Headquarters platoon. This platoon contains the train dispatcher's office and the administrative and technical section.

(1) **ADMINISTRATIVE AND TECHNICAL SECTION.** Performs the dual function of military administration and railway administration. Battalion sergeant major acts as chief clerk for the adjutant. He has under his direction routine battalion administration, pay rolls, morning reports, records, and mail. He has as his assistants a T-5 general clerk and a private. When directed by the battalion commander, all company clerks report to the adjutant for duty in his office in connection with company records of their companies. Railway administration for the battalion is supervised by a master sergeant, chief clerk to division superintendent. He has charge of railway office management, supervises rendition of reports on railway operations, and keeps records and collects data relating to the railway. He is assisted by one T-4 general clerk, one T-5 stenographer, and one private.

(2) **TRAIN MOVEMENT SECTION.** This unit reports to the division superintendent or his assistant. It is responsible for movement of trains, coordination of clocks and watches, distribution of cars and motive power, and maintenance of car, locomotive, and train movement records.

(a) First lieutenant, commanding officer of headquarters platoon, is also chief dispatcher and reports to the division superintendent or his assistant. He is responsible for train movements, train orders, prompt movement of traffic, coordination of watches and time with higher authority and within the division, and the dispatch and distribution of motive power so as to be in a position to move all traffic offered in a prompt and efficient manner. He supervises car ordering and movement of empty equipment over his division; prompt loading and unloading of cars, and disposition of surplus equipment; supervises work of dispatchers and sees that they are handling trains safely and expeditiously. He sees that dispatchers and operators issue and copy train orders in a correct manner, and investigates train delays on the road. He keeps a record of all cars set off at nonagency stations when in bad order or otherwise, and arranges for

prompt repairs, unloading or loading, as the case may be. He reports immediately any violation of rules by train crews to the superintendent or trainmaster. He notifies the various division department heads of any materials consigned and being moved to them, also point and time at which consignment will be set so they may arrange for unloading. He sees that all fuel stations are amply supplied with fuel and that sufficient quantity is kept en route. He keeps himself informed of conditions of facilities such as water towers, signals, fuel stations, etc., and calls the proper officer's attention to failures. He dispatches trains on a priority basis as directed by the superintendent. He maintains a record of train movements. He sees that proper authority is advised as to cars wanted and car surplus on territory under his supervision (see TM 55-265).

(b) Master sergeant, principal assistant to the chief dispatcher.

(c) Technical sergeants, train dispatchers, one for each shift.

(d) Staff sergeant, car distributor.

(e) Technician grades and privates. Station agents, telegraphers, telephone operators, and basics employed at various stations along the line. A station agent is assigned to duty at station locations in the divisional territory. A station agent is the representative of the railroad at the station. He is responsible for condition and protection of the station, for prompt placing of cars for loading and unloading, and for their subsequent movement. He posts official notices and time tables in his station. He sees that cars are properly loaded and seals them for shipment. When cars are received, he promptly notifies the organization or person to whom they are billed, or the individual responsible for loading at the station. The station agents are responsible for issue of tickets, for custody of station records, and for preparation and forwarding of station reports.

c. Service platoon. This platoon contains the supply and transportation section and the mess section. It is commanded by a first lieutenant, a mess officer.

(1) **SUPPLY AND TRANSPORTATION SECTION.** This section provides clerical personnel for division store-

keeper's office and personnel for operation of motor vehicles of the headquarters company. The unit is charged with receipt, distribution, and storage of supplies for the battalion. It reports to the battalion supply officer and works under his direct supervision. All battalion motor vehicle maintenance and all battalion shoe repairing is performed by this section with the assistance of men detailed from the companies when necessary.

(a) Warrant officer acts as assistant division storekeeper.

(b) Technical sergeant is the principal assistant of the supply officer. He dispatches motor vehicles and keeps battalion stores.

(c) Technician grades and privates. Automobile mechanic, storekeeper, and basic.

(2) MESS SECTION. This section operates messes at terminals, shops, division points along the permanent way where the establishment of separate messes are required to feed personnel located at or passing through such points, on a 24-hour basis when required.

(a) Technical sergeant, battalion mess sergeant, is in charge of the receipt, preparation, and distribution of the rations of the battalion.

(b) Staff sergeants, mess sergeants, supervise operation of messes. They are responsible for condition of messes assigned to them by battalion mess sergeant.

(c) Technician grades and privates. Cooks and helpers are assigned to mess sergeants or to individual messes. Basics are assigned as needed.

Section IV

Maintenance-of-Way Company (Company A)

19. ORGANIZATION (fig. 3). Maintenance-of-way company is composed of company headquarters, bridge- and building-maintenance platoon, track-maintenance platoon, and signal-maintenance section (see T/O 55-227).

20. FUNCTION. **a.** Conditions frequently prevailing in the theater of operations make the task of the maintenance-of-way company very difficult. Rapid deterioration of the roadbed and track under heavy traffic and bombardment, and damage to other structures by the latter, place a severe burden on this company. Since personnel of this company are scattered over every mile of the railway division, authority must be delegated to subordinates and constant supervision exercised by officers of the company in order to insure efficient maintenance.

b. Maintenance of way includes repair and upkeep of track, switches, bridges, culverts, water lines, water tanks, buildings, signals, and communications; in fact, all railway property maintenance and repair which are not expressly delegated to other agencies.

c. The maintenance-of-way company gradually improves condition of the track as opportunity offers, and installs such additional facilities of a minor nature as may be found advisable for the purpose of improving train operation. Structures require almost constant and rigid inspection to prevent failure and possible accidents to trains.

d. An active enemy equipped with long-range guns and bombing airplanes can be expected frequently to damage the roadbed and structures. Repairs must be accomplished rapidly and effectively. The maintenance-of-way company must have sufficient troops at its disposal to take care of emergency work of this character without seriously interfering with normal maintenance. Additional personnel may be provided from other companies of the battalion or by higher authority.

e. The track-maintenance platoon operates the water service facilities under technical supervision of the water service foreman.

21. COMPANY HEADQUARTERS. This headquarters has necessary personnel to take care of normal administration and supply of the company, coordination of maintenance activities, and operation of certain specialties common to the three platoons.

a. Captain, company commander, is the engineer, maintenance of way, and is directly responsible to the division superintendent or assistant division superintendent. He has charge of all engineering pertaining to maintenance of way and supervises maintenance of track, roadbed, bridges, buildings, fences, and other structures, water supply, and signals and communications; makes frequent inspections to see that his organization is securing proper standard of maintenance; approves and checks before forwarding all requisitions for material; and is responsible that sufficient emergency stock is maintained on the division. He is also responsible for military administration of his company and for rendition of military and railway reports. His territorial limits are the same as those of the division superintendent.

b. Second lieutenant, assistant to the engineer, maintenance of way, normally handles administration and supply matters under direction of the company commander. He may be delegated such other duties as the situation requires. He is assigned to track maintenance platoon headquarters.

c. First sergeant has immediate charge of all routine matters of the company. He prepares or supervises prepara-

tion of routine reports, keeps organization records, prepares and issues orders, and performs such other work as may be assigned to him.

d. A staff sergeant, draftsman, railway, is in charge of surveys, design, drafting, and photography. He is assisted by two railway draftsmen. When it is necessary to make surveys, additional men are detailed from the company headquarters or the platoon. Supply sergeant, staff sergeant, is in charge of receipt and issue of maintenance-of-way supplies of the battalion and individual and organizational supplies of the company. He maintains such stocks of materials as the situation may demand. He keeps in touch with supply requirements of the platoons and prepares and forwards requisitions. He is assisted by stock clerks and drivers. He works under the technical supervision of the division storekeeper.

e. Corporal, company clerk, is charged with care and preparation of records of the company and reports to first sergeant.

f. Privates. Bugler, truck and tractor drivers, stock clerks, power-shovel operator, basic. Bugler is company messenger and reports to first sergeant. Basic privates are engaged on such tasks as may be designated by first sergeant. Truck drivers and stock clerks report to supply sergeant. A tractor driver and power-shovel operator report to first sergeant.

22. BRIDGE- AND BUILDING-MAINTENANCE PLATOON. This unit consists of platoon headquarters and three bridge and building sections. The platoon normally is charged with all railway maintenance other than rolling stock, motor vehicles, shop machinery, roadbed, and signal lines. The principal duties of the platoon are maintenance of bridges and buildings, and of coaling and watering facilities. The three bridge and building sections may be employed at various places along the line or on a three-shift basis for a given job.

a. Platoon headquarters. This headquarters coordinates and inspects activities of the bridge and building sec-

tions, and furnishes technical and crane services for the platoon.

(1) First lieutenant, platoon commander and supervisor of bridges and buildings, reports to the engineer, maintenance of way, to whom he is responsible for safety and adequacy of structures. He supervises work of his platoon and furnishes it with proper materials and tools. He is responsible for maintenance of emergency supplies of bridge material to replace structures washed out, burned out, or destroyed. He aids the track supervisor, if necessary, in opening the line for traffic after damage. He supervises maintenance-of-water stations, coal stations, and stationary boilers in stations and buildings except shops. He is responsible for messing and care of his men.

(2) Technical sergeant, second in command, is assistant supervisor of bridges and buildings and handles such matters as may be delegated to him by the platoon commander. He keeps all bridge records, prepares requisitions for bridge materials, prepares bridge reports, and keeps informed of the location of bridge materials, their kind, and quantity. He keeps technical records of other structures assigned to the bridge and maintenance platoon. He supervises activities of his staff sergeants, bridge, and building foremen.

(3) Staff sergeant, foreman of water service, is assisted by two technicians grades 4 and 5, and basic privates, if necessary. He determines quality of water by simple tests, quantity available, and recommends such changes as may be in the interest of more efficient service. He keeps in touch with the officer in higher headquarters charged with railway water activities. He maintains water installations in co-operation with bridge and building sections.

(4) Technicians and privates. (a) Technician, grade 4, is bridge inspector and reports to platoon commander, makes requisitions for bridge repairs, and performs duties assigned by company commander.

(b) Water supply men are charged with maintenance of pumps and water lines, and report to foreman of water service.

(c) Rigger performs duties as required and reports to technical sergeant, second in command.

(d) Privates perform duties as outlined in Table of Organization or as directed.

b. Bridge and building section. This section is organized and equipped to maintain structures and to build new structures within its capacity.

(1) Staff sergeant, in charge of the section, is construction foreman and supervises work of the section and is responsible for discipline and care of his men. He sees that there are no delays due to lack of materials. When section is separated from company mess he sees that arrangements are made for messing.

(2) Technicians and privates. (a) Two technicians grade 4, bridge builders, are group leaders and perform duties as assigned by section leaders.

(b) Technicians are assigned to group leaders or special jobs by the section leader. Included in section are blacksmiths, bridge and building general carpenters, pipe fitters, structural-steel workers, stone mason, and basics.

23. TRACK-MAINTENANCE PLATOON. This unit is composed of a platoon headquarters and six track-maintenance sections of two squads each. It is responsible for the safe condition and proper maintenance of roadbed, track, tunnels, right-of-way, station grounds, driveways, crossings, fences, cattle guards, track signs, etc., within the railway divisional area.

a. Platoon headquarters. This headquarters supervises activities of the track-maintenance sections and distributes tools and materials, prepares and forwards requisitions, and routine inspection reports.

(1) First lieutenant, platoon commander, is track supervisor and reports to and receives instructions from the engineer, maintenance of way. He assigns territorial limits to track maintenance sections and prescribes their duties. He examines track-maintenance sergeants and corporals, track section foremen, to see that they are conversant with all rules and special instructions of the maintenance-of-way department and such rules of other departments as are required in the proper performance of their duties. He holds track-

maintenance sergeants responsible for discipline, training men of their sections, and for railway property within their territories. He is responsible for advance ordering of sufficient track materials to insure rapid repairs, and for surplus materials in his territory. In case of train accident, line obstruction, or damage, he proceeds at once to the site with forces, tools, and materials at his command: He clears the track and makes temporary repairs to permit passage of trains. Permanent repairs are made as soon as conditions permit. He takes charge of all section hands who report for duty. He is responsible for care and messing of his men and defense of the line unless this defense is delegated to other troops.

(2) Staff sergeant, second in command, is assistant track supervisor, and handles such matter as may be delegated to him by the platoon commander. He normally supervises training and operation of personnel of the platoon.

b. Track-maintenance section. This section consists of a track-maintenance sergeant and two track-maintenance squads. It is a maintenance unit assigned to a prescribed territory, comprising two track sections, by the platoon commander. It is responsible for all maintenance work within territorial limits of the section unless expressly delegated to other units.

(1) Sergeant, track maintenance, is responsible for discipline and training of his men and supervises their work. He normally has administrative and disciplinary control of all personnel assigned to permanent duty within his area. He is responsible for defense of his area. He has no technical control of men not assigned to his section. He commands track-maintenance personnel through corporals in charge of track-maintenance squads. He is responsible for all track-maintenance tools and materials within his area.

(2) Each track-maintenance squad is composed of—

(a) Corporal or private first class, track section foreman, is responsible for the maintenance of track, roadbed, and right-of-way of the territory allocated to him. He goes over rail lines of his area or sends a reliable trackwalker with suitable tools at least once a day to make thorough inspections and see that track, highway crossings, bridges, culverts,

fences, signals, telegraph lines, etc., are in safe condition. He is responsible for discipline and training of his men, for tools and materials assigned to him by the track-maintenance sergeant, and for timely requests for additional tools and supplies.

(b) Privates, section hands.

24. SIGNAL-MAINTENANCE SECTION. This unit reports to the engineer, maintenance of way. It is responsible for maintenance of communications of the railway division, and its duties include repair of telephone, telegraph, and signal equipment, and the maintenance of signal and communication lines. When conditions warrant, the signal-maintenance section may be attached to the headquarters company for duty.

a. First lieutenant, as signal supervisor, is in charge of section. He supervises all signal and communication maintenance and cooperates with the Signal Corps on technical matters.

b. Staff sergeant, wire chief, telephone and telegraph, is second in command, and handles such matters as may be delegated to him by the platoon commander. He normally supervises training and operation of personnel of the section.

c. Corporals, linemen, telephone and telegraph, who direct maintenance of wires and circuits; and railway signal maintainer, who directs repairs to railway signal equipment and circuits.

d. Technicians, general-carpenter, lineman, railway signal maintainers, telephone and telegraph installer-repairman, and basics.

Section V

Maintenance-of-Equipment Company (Company B)

25. ORGANIZATION (fig. 3). Maintenance-of-equipment company is composed of company headquarters, car-repair platoon, and locomotive-repair platoon (see T/O 55-228).

26. FUNCTION. This company is responsible for running repairs of rolling stock, tools, and mechanical appliances, inspection and conditioning of rolling stock, and maintenance and operation of fuel and lubrication facilities. Its duties are equivalent to those of a roundhouse force on a civilian railway. Heavy repairs, general overhauling, and major replacements are performed in back shops operated by a railway-shop battalion or civilian personnel. The maintenance-of-equipment company—

- a. Makes running repairs, tests, and inspections of rolling stock.
- b. Washes boilers.
- c. Repairs all tools and mechanical equipment of companies of the battalion.
- d. Does all sign painting for the battalion.
- e. Establishes and maintains a fuel reserve for the battalion.
- f. Establishes and maintains a gasoline, oil, kerosene, and grease reserve for the battalion.
- g. Operates fueling and ash facilities.

27. COMPANY HEADQUARTERS. Supervises technical operations of the two platoons, administers the company, procures, stores, and issues tools and materials for which the company is responsible, and operates drafting room.

a. Captain, company commander and master mechanic, is responsible to the division superintendent or assistant division superintendent. He assigns personnel to jobs and maintains an adequate supply of materials. He is responsible that personnel under his direction cooperate with other departments in their effort to facilitate operation of trains. He prescribes rules and regulations for protection of shops against fire and makes frequent inspections to see that they are complied with. He is responsible for protection of the shops and will make such provision therefor as the situation may demand.

b. First lieutenant, second in command and mechanical engineer, assists the master mechanic in performance of his duties and has direct charge of the drafting room and procurement, issue, and storage of tools, materials, and supplies. Personnel under his personal direction are supply sergeant, mechanical draftsman, and storekeepers.

c. Second lieutenant, assistant to master mechanic, normally handles administration and supply matters under direction of the master mechanic. He will see that all rules pertaining to equipment inspection, tests, boiler washouts, etc., are complied with. He will maintain record of condition of locomotives and cars and perform such other duties as assigned by the master mechanic.

d. First sergeant, chief clerk, is responsible for preparation and rendition of administrative reports of a military or technical nature. He keeps all records. He is assisted by the corporal clerk (for more detail, see par. 21).

e. Staff sergeant, supply sergeant, is in charge of procurement, receipt, storage, and distribution of railway supplies, materials, tools, as well as rations, individual equipment, and organizational equipment. He reports to the company commander but is under technical supervision of the division storekeeper.

f. Corporal, company clerk, prepares and cares for records of the company and reports to the first sergeant.

g. Technicians and privates. (1) Technician 5th grade, draftsman, is in charge of drafting room. He performs all drafting, photographic, and reproduction work for the company. He reports to the mechanical engineer on all technical matters.

(2) Stock clerk (storekeeper), assists the supply sergeant in the procurement, receipt, storage, and distribution of railway supplies, materials, and tools, including organizational equipment. He is normally assisted by stock clerks, privates.

(3) Privates, truck drivers and stock clerks, will report to the supply sergeant, bugler to first sergeant. Basics are employed on various tasks.

28. CAR-REPAIR PLATOON. This platoon is composed of headquarters, wrecking crew, and car-repair section. It is charged with maintenance, repair, and inspection of cars, operation of wrecking train, and execution of all sign painting.

a. Platoon headquarters. Supervises operation of the car-repair shop and inspects all cars passing over the division.

(1) First lieutenant, platoon commander and general car foreman, under supervision of the master mechanic, has direct charge of the car-repair shop. He is responsible for discipline and training of his men and their suitability for work to which assigned and for inspection and tests of air brakes and air equipment, in addition to repair of cars. He has direct supervision of car inspection and of supply of car-repair materials. He is the equipment department representative at wrecks. It will be his responsibility to see that damage to equipment is held to a minimum when picking it up after wreck, with full consideration for clearing the wreckage as quickly as possible.

(2) Technical sergeant, platoon sergeant and second in command, is the foreman in charge of the car shop. He coordinates work of car repair and requisitions shop materials.

(3) Technicians 5th grade, car inspectors, railway, have charge of car inspection and report to lieutenant in command or to the platoon technical sergeant. Each technician 5th grade, railway car inspector, has one private as assistant car inspector.

b. Wrecking crew. Operates equipment assigned to wrecking train and supervises removal of wrecks or other line obstructions. It works under direction of the battalion commander or his assistant while engaged upon wrecking activities. When wrecking crew is not employed upon removal of wrecks, personnel is attached to car-repair section. The crane operator, fireman, and staff sergeant wreckmaster care for wrecking equipment under direction of the master mechanic in connection with their other duties. Any additional men required for wrecking operations will be drawn from the car-repair platoon.

(1) Staff sergeant, wreckmaster, is responsible for equipment and materials of wrecking train and for employment of wrecking crew when engaged upon wrecking activities.

(2) Technicians and privates. (a) Technicians 4th grade, car mechanic (railway) (steel-car work), crane operator and welder, combination.

(b) Technicians 5th grade, car mechanic (railway), and railway mechanic (general).

(c) Privates, car mechanic (railway), stationary boiler fireman (fires wrecking crane). Designations indicate their duties. Basic is assigned as needed. When these men are not engaged in wrecking activities they are assigned to other duties as indicated above.

c. Car-repair section. Performs all car repairing and maintenance work, assisted by personnel from wrecking crew when assigned to it. It is responsible for all sign painting for the battalion.

(1) Staff sergeant, car shop foreman assistant, is in charge of car-repair shop. He is responsible for discipline and training of his men and supervises their work. He keeps the supply sergeant informed of material requirements of the shop.

(2) Technicians and privates. Air-brake mechanic (railway), blacksmith, car carpenter (performs truck and wood-work), car mechanic (railway) (performs all steel work), pipe fitter (railway), welder (electric arc). Designations indicate their duties and their employment depends upon the tasks assigned to them by the car-repair section. Basics are assigned as needed.

29. LOCOMOTIVE-REPAIR PLATOON. This platoon is composed of headquarters and locomotive-repair section, common, plus special sections as needed. The platoon is charged with maintenance of locomotives and mechanical appliances, operation of locomotive cranes used for fuel and ash handling, and washing out of boilers. It is organized to permit operation of running repair shop on a three-shift basis. It may be organized to operate on a one- or two-shift basis if directed by master mechanic.

a. Platoon headquarters. Supervises operation of running repair shop, inspects locomotives, and handles administrative matters in connection with activities of the platoon.

(1) First lieutenant, engine-house foreman, commands the platoon and has charge of the shop train or engine house and other terminal facilities for handling power. He supervises dispatch of engines and sees that all engines arriving at their terminals are properly inspected, equipped, and in condition when ordered for service. He prescribes safety rules and regulations, and by frequent inspections sees that they are complied with. He sees that there are no avoidable shop delays due to lack of material or tools.

(2) Technician 5th grade, power-plant engineer, is responsible for maintenance of the engine-house power plant.

b. Locomotive-repair section, common. This section contains sufficient personnel for the operation of the shop and terminal facilities, regardless of type of motive power, but must be complemented by at least one of the special sections (see **c**, **d**, and/or **e** below).

(1) Staff sergeant, assistant engine-house foreman, is responsible for operation of the shop, for repairs to locomo-

tives, and the operation of locomotive cranes. He reports to and receives instructions from either the platoon commander or technical sergeant, engine-house foreman, in charge of one of the special sections.

(2) **Technicians and privates.** The balance of the personnel in this section comprises all the labor common to the maintenance of motive power regardless of type. There are brake inspectors, blacksmiths, coppersmiths, crane operators, electricians, firemen, stationary boiler and locomotive hostlers, machinists, pipe fitters, railway mechanics, welders, and basics. Their designations indicate the type of work on which these men are normally employed. The basics are assigned as needed.

c. Steam section. The locomotive-repair section, common, must always be supplemented by one or more of the special sections depending upon the type of motive power maintenance involved. It is assumed that the most common used will be steam. This section is, therefore, incorporated as part of the normal battalion for activation and training purposes. It contains—

(1) **Technical sergeant, shop engineer (railway),** who as assistant enginehouse foreman is the administrative assistant of the enginehouse foreman, first lieutenant, and is responsible for shop procedure and practices, dispatching records, and monthly, quarterly, and other periodic locomotive tests as required for reports on condition of motive power. He is assisted by—

(2) **Staff sergeants, two assistant enginehouse foremen,** who together with the one of equal grade in the locomotive-repair section, common, provide sufficient supervisory force to maintain a round-the-clock operation.

(3) **Technicians and privates.** The balance of the steam section contains sufficient additional personnel to make running repairs to locomotives normally assigned to the railway operating battalion where the principal motive power is steam. There are boilermakers and locomotive mechanics. Basics are assigned where needed.

d. Diesel section. Where Diesel motive-power maintenance is involved, this section will be activated and may

or may not be substituted for the steam section depending upon whether or not both types of motive power are to be maintained. Where this section is in addition to the steam section, the top ranking noncommissioned officer in the steam section will be the one directly responsible to enginehouse foreman, first lieutenant. Where this section is activated in substitution, the following should apply:

(1) Technical sergeant, Diesel foreman, is responsible for repairs to Diesel power. He reports to the enginehouse foreman, first lieutenant, and is assisted by staff sergeants, two assistant Diesel foremen. The total of three noncommissioned officers thus provides sufficient supervision for round-the-clock operation.

(2) Technicians and privates. The balance of the personnel in this section, together with the personnel of the locomotive-repair section, common, provides sufficient specialized Diesel maintenance trained personnel to make running repairs to Diesel motive power. There are electricians, electric motor repairmen, general machinists, Diesel mechanics, and sheet metal workers. Their designations indicate the type of work on which these men are normally employed.

e. Electric section. Activated where electric motive-power maintenance is involved. This section will be activated but may or may not be in substitution for the steam section, depending upon what types of motive-power maintenance are involved. If steam motive-power maintenance is involved in addition, the highest ranking noncommissioned officer in the steam section will be in technical charge of the enlisted personnel and directly responsible to the enginehouse foreman, first lieutenant. He shall so combine the personnel of both special sections as to effect a proper command on both military and technical matters. Where electric motive-power maintenance only is involved, the following will apply:

(1) Technical sergeant, electric-locomotive foreman, is responsible for repairs to electric motive power and in addition thereto is charged with the supervision of electric repairs to rolling stock and to electrical installations, including power and shop trains or running repair shops. **

reports direct to the enginehouse foreman, first lieutenant. He is assisted by staff sergeants, two assistant electric-locomotive foremen, who together with the technical sergeant, constitute sufficient supervisory personnel to conduct a 24-hour operation.

(2) Technicians and privates. There are sufficient electricians, electric-locomotive repairmen, electric-motor repairmen, general machinists, and sheet-metal workers, together with the personnel of the locomotive-repair section, common, to perform its mission.

Section VI

Transportation Company (Company C)

30. ORGANIZATION (fig. 3). The transportation company is designed to provide flexibility required to operate a relatively small number of heavy trains in rear areas, a relatively large number of light trains in forward areas, to provide switching operations at terminals, or any combination of these duties. It is normally organized with a company headquarters and two train-operating platoons (see T/O 55-229). It may be organized with only one or with more than two train-operating platoons as conditions require.

31. FUNCTION. **a.** The transportation company operates trains, yards, and stations within territorial limits of the railway division. Chief responsibility is expeditious handling of traffic. Every effort must be made to deliver freight and troops to their destinations at the time they are required. Initiative and ingenuity must be developed to insure a constant flow of supplies to troops in spite of physical difficulties.

b. The number of trains which may be operated in 24 hours depends upon the length of the line, condition of track and equipment, number and location of passing tracks, nearness to front, etc. For the purpose of planning it may be assumed that the transportation company has sufficient personnel to operate a maximum of 20 trains in each direction in 24 hours. Twenty-five train crews are provided in each operating platoon but the number of trains which can

be operated normally must be reduced below twenty-five in order to permit periodic rest, and switching crews for yard operation.

32. COMPANY HEADQUARTERS. Provides personnel for supervision, inspection, and administration of the company and for yard and station operation of the railway division. Minor stations are normally in charge of a T-4 station agent (see par. 18). Stationmasters who are members of the staff of the general superintendent may be assigned to the superintendent, and will be located at important railway stations in addition to the station agents to expedite movement of troops and supplies. The stationmaster represents the superintendent of the railway division in which he is located and, under the supervision of the trainmaster, is in charge of all railway troops at his station.

a. Captain, commanding the company, is trainmaster for the railway division. He is responsible to the division superintendent or assistant superintendent for discipline, training, messing, housing, and general care of his men, and for operation of trains, yards, and stations. He sees that prescribed rules and regulations are complied with. In the absence of instruction from higher authority, he prescribes such rules and regulations as may be required in the interest of safe and efficient operation. He sees that no unnecessary trains are run, and that trains move promptly and regularly over the division. He investigates train delays and accidents, inspects condition of equipment and stations, supervises loading and unloading of cars, and sees that cars are used to the fullest extent. He cooperates with the train movement section of headquarters company, and makes such recommendations relating to train movements as may improve operating conditions.

b. First lieutenant, general yardmaster, reports to the trainmaster. He has charge of making up trains and distribution of cars in the yards. He is responsible that train operating platoon receives early information concerning train movements so that crews will be available. He sees that cars are properly placed for loading and unloading and that all cars needing repairs are sent to repair tracks or to

the shop. He keeps such records and submits such reports as may be required by higher authority or may be necessary in the interest of efficient operation.

c. Second lieutenant, assistant to trainmaster, assists the trainmaster in the performance of his duties and performs such tasks as are assigned to him by the trainmaster.

d. First sergeant. See paragraph 21c for details.

e. Technical sergeant, trainmaster's clerk, performs such duty and compiles such records and reports as are required. He is assisted by one clerk. Additional clerical help may be assigned to him from the basic privates.

f. Staff sergeant. (1) Under the supervision of the general yardmaster, a yardmaster, staff sergeant, is provided for each shift to provide 24-hour yard operation. Each yardmaster is responsible for make-up of trains, switching and placing of cars in his yard during his shift, and for personnel engaged upon these activities. They are assisted by one clerk (T-5) each. Supply sergeant, staff sergeant, is charged with receipt and issue of supplies and equipment. He keeps in touch with supply requirements of the company and prepares requisitions. He has supply clerks and truck drivers as assistants. The trucks are under his direction. He works under the technical supervision of the division storekeeper.

(2) Yard conductors report to and receive instructions from the yardmaster in charge of the yard in which they operate. The yard conductor and the switching crew which he commands are both drawn from the operating platoon.

g. Corporal, company clerk, assists the first sergeant in the care and preparation of records of the company. T-5 general clerk acts as assistant company clerk.

h. Privates. Bugler reports to first sergeant. Chauffeurs report to supply sergeant, yard clerks report to general yardmaster or his assistant, two clerks to first sergeant. Basic privates report to first sergeant for assignment of duties.

33. TRAIN-OPERATING PLATOON. This platoon is composed of headquarters and 25 train crews and is charged

with operation of trains between terminals, and switching operations as required.

a. Platoon headquarters. Supervises, dispatches, and inspects train crews.

(1) First lieutenant, platoon commander and traveling engineer or road foreman of engines, reports to and receives instructions from the trainmaster and cooperates with the master mechanic to insure proper mechanical condition of motive power. He has authority over train crews. He frequently rides upon engines and instructs engineers and firemen in their duties. He takes measures to avoid engine failures and delays. He reports any deficiency in water and fuel to the trainmaster. He informs the trainmaster and master mechanic of condition of engines leaving the shop for service.

(2) Technical sergeant, assistant road foreman of engines, assists the road foreman in the performance of all his technical duties.

(3) Staff sergeant, clerk to road foreman of engines, performs such duties as may be delegated to him by the platoon commander. He normally handles administrative matters, keeps platoon records, and supervises dispatch of crews. He is assisted by crew dispatchers, technician 5th grade.

(4) Privates, basic, are assigned to duties by the clerk to road foreman of engines.

b. Train crews. Operates either a freight or a passenger train or performs switching operations.

(1) Sergeant, train conductor, is responsible for prompt movement of freight and passengers to their destination, and for safety and condition of train en route. He is governed by rules and regulations prescribed for operation of trains.

(2) Privates and technician grades, brakemen, engineer, and fireman. The brakemen (privates) report directly to the conductor. The engineer (T-4) reports to the conductor and is responsible for mechanical condition of the locomotive, for observance of rules and regulations applicable to it, and for prompt and efficient discharge of duty by the fireman (T-5).

Section VII

Electric Power Transmission Company (Company D)

34. ORGANIZATION (fig. 3). The electric power transmission company is composed of a company headquarters, a platoon headquarters, and an electric power section (see T/O 55-217).

35. FUNCTION. **a.** This company will be activated only when the use of electric motive power is involved.

b. This organization is responsible for the maintenance of the electric supply system of an electrified railroad consisting of catenary system, or third rail system, and the necessary substations pertaining thereto. It is not responsible for the actual generation of electric power, whether it be thermal or hydroelectric.

36. COMPANY HEADQUARTERS. This headquarters has necessary personnel to take care of normal administration, supply of the company, and supervision of the electric platoon.

a. Captain, company commander, is the electrical engineer and is directly responsible to the division superintendent. He assigns personnel to jobs and maintains an adequate supply of materials. He is responsible for personnel under his direction and cooperates with other departments in their efforts to facilitate the operation of trains by maintaining the electric transmission system in proper condition.

b. First lieutenant, second in command, is designated as superintendent of transmission and assists the electrical engineer in the performance of his duties and is directly responsible for direction of personnel in the electric power section.

c. Second lieutenant, assistant to the electrical engineer, is responsible for administration and supply of the company and any other duties that may be assigned by the company commander.

d. First sergeant, chief clerk, is responsible for preparation and rendition of administrative reports of a military or technical nature. He keeps all records. He is assisted by corporal, clerk-typist.

e. Staff sergeant, supply sergeant, is in charge of procurement, receipt, storage, and distribution of electrical supplies, materials, tools, as well as individual and organizational equipment. He reports to the company commander but is under the technical supervision of the assistant electrical engineer.

f. Corporal, company clerk, prepares and cares for records of the company and reports to first sergeant.

g. Privates, clerks, general, assist the company clerk.

37. ELECTRIC POWER PLATOON. **a.** This platoon is composed of platoon headquarters and one electric power section. The platoon is charged with the maintenance and repairs of the electric transmission system of an electrified railroad division.

(1) First lieutenant, platoon commander and superintendent of power transmission, is also second in command of company (see par. 36b).

(2) Privates, stock clerk and truck drivers, report to superintendent of transmission. Both are under technical supervision of supply sergeant.

b. (1) Technical sergeant, substation operator, has supervision over load and proper distribution of electric current over the division and reports direct to the superintendent of transmission. He has direct supervision over power supervisors and substation operators. Technical sergeant,

substation electrician, has supervision over maintenance and repair crews and reports direct to the superintendent of transmission.

(2) Staff sergeants, three, each is a substation operator expected to perform an 8-hour tour of duty. Each reports to and is under the supervision of the superintendent of transmission, through technical sergeant, substation operator, and has supervision over the substation operators (privates and technicians) on their respective tours of duty.

(3) Sergeant, high-voltage cable splicer, reports to superintendent of transmission through technical sergeant, substation electrician, and is the assistant to the latter in the performance of any duties assigned. Arranges for repair and maintenance of all cables pertaining to the operation of substations and power distribution system exclusive of catenary and third rail. High-voltage linemen report to superintendent of transmission through technical sergeant, substation electrician, and have direct supervision over high-voltage linemen. Technicians and privates, high-voltage linemen, arrange for repair and maintenance of all high power and distribution lines other than electric cables although they may assist in the repair of cables should it become necessary. Substation electrician reports to technical sergeant, substation electrician, and assists him in his duties. Substation operator is used as assistant to technical sergeant, substation operator, and acts as relief for staff sergeants, substation operators.

(4) Corporals, high-voltage cable splicers, report to and are under direct supervision of technical sergeant, cable splicer, and act as assistants to the latter. High-voltage linemen report to technical sergeant, substation electrician, through staff sergeant, high voltage lineman, and act as assistants to the latter. Third-rail repairmen report to substation electrician, technical sergeant, through sergeants, high-voltage linemen, and act as assistant to the latter. Designations indicate duties of technicians and privates.

Section VIII

Ambulance Train Maintenance

38. SCOPE AND ORGANIZATION. The Military Railway Service is responsible for the mechanical maintenance of ambulance trains in the theater of operations. For this purpose, there are two units of the service: the ambulance train maintenance section (see T/O 55-500 column FJ) and the ambulance train maintenance crew (see T/O 55-500 column FK). These are under the direction of and subject to assignment by the general manager, Military Railway Service, or senior Military Railway Service officer of the theater.

39. FUNCTION. These units are responsible for the maintenance of ambulance trains in the following manner:

a. Each ambulance train maintenance section is designed to maintain four ambulance trains that are operated out of the station, port, or base to which it is assigned.

b. The ambulance train maintenance crew is designed to ride the ambulance train and perform any running repairs required. There will be such a crew for each ambulance train. These crews will be attached to the ambulance train maintenance section for administration and duty.

c. The ambulance train maintenance section and attached crews may be attached to any other Military Railway Service unit in the area, by direction of the general manager or the senior Military Railway Service officer.

d. The ambulance train maintenance section is responsible for light repairs to ambulance trains including—

- (1) Running repairs to rolling stock.
- (2) Repair and maintenance of electrical equipment, including train power unit, electric wiring, batteries, etc.
- (3) Repair and maintenance of heating and cooling system.
- (4) Repair and maintenance of plumbing facilities.
- (5) Cleaning of exterior of ambulance trains.

40. AMBULANCE TRAIN MAINTENANCE SECTION

(see T/O 55-500 column FJ). The ambulance train maintenance section, including 1 officer and 24 enlisted men, is assigned duties as follows:

a. First lieutenant, general car foreman, commands the section and is charged with the maintenance of ambulance trains and the supply of maintenance repair parts.

b. Staff sergeants, assistant car foremen, two. Each is second in command on his respective shift. They are responsible for the preparation of requisitions, all maintenance work on ambulance trains, both interior and exterior, including rolling stock, electrical apparatus, heating, cooling, and plumbing facilities, and the cleaning of the exterior of ambulance trains. They are assisted by a brake inspector, a blacksmith, car carpenters, car mechanics, a coppersmith, electricians, pipefitters, a painter, and clerks.

c. Should the ambulance train maintenance section not be attached to any other Military Railway Service unit, it will be provided with an adequate mess team (see T/O 55-500 column AD), and it will be the responsibility of the commanding officer to provide proper messing and housing of the section and attached ambulance train maintenance crews.

d. The Medical Corps personnel is responsible for cleaning and sanitation of the interior of ambulance trains.

41. MAINTENANCE CREW (see T/O 55-500, column FK). **a.** In addition to the ambulance maintenance section, there is presumed to be an ambulance maintenance

crew for each ambulance train, composed of three enlisted men—one electrician, one pipefitter, and one car carpenter. This crew rides the ambulance train and provides running repairs and maintenance to the rolling stock. It also maintains and operates the train power unit and other electrical apparatus, the heating, cooling, water, lighting, and plumbing facilities.

(1) The electrician will maintain the wiring and electrical system, including the train power unit and other electrical apparatus, and in particular will be responsible for assuring that the batteries are kept fully charged at all times.

(2) The pipefitter will be responsible for the utility car, the heating and cooling system throughout the train, and the plumbing system.

(3) The car carpenter is available for general repairs, handling minor defects, such as broken train equipment, window glass, etc.; and to assist the other two maintenance men as required.

b. They will be messed and housed with the Medical Corps personnel while on the ambulance train.

Section IX

Drill and Ceremonies

42. GENERAL. **a.** Units of the railway operating battalion are organized for work and not for drill and combat. The company as a unit does not, in general, engage in prescribed drills. Such drill as is conducted is normally executed by the platoon. It practices close-order drill to the extent necessary to prepare for participation in ceremonies and marches.

b. Organization of companies of the battalion as given in Tables of Organization shows personnel as grouped while engaged upon railway work. This organization is adaptable to drill, ceremonies, inspections, and combat.

c. Companies are assembled and inspected in these formations.

d. Noncommissioned officers will be assigned to duty as platoon leaders, platoon sergeants, platoon guides, squad leaders, and second in command of squads.

e. Fundamentals of drill, ceremonies, inspections, and combat prescribed in FM 22-5 for the infantry rifle company and infantry battalion are applicable to units of the railway operating battalion with such changes as are specified herein or are required due to difference of organization or arm.

43. BATTALION STAFF. **a.** The battalion commander's staff for ceremonies consists of second in command (assistant division superintendent), adjutant, battalion surgeon, and division storekeeper.

b. Enlisted personnel of the battalion commander's staff consists of master sergeant, dispatcher, and one private from headquarters and service company.

c. Arrangement of members of the battalion staff is in accordance with provisions of FM 22-5.

44. COLOR GUARD AND GUIDON. a. Color guard.

(1) Color guard consists of the battalion sergeant major who is the battalion color bearer, and two privates selected by the battalion commander, usually from headquarters company.

(2) Regulations governing the color are contained in FM 22-5.

(3) The maintenance-of-way company is the color company.

(4) At drills and ceremonies in which the color is to participate, except escort to the color, the color is received by the color company prior to formation of the battalion as described in FM 22-5.

b. Guidon. The guidon is carried according to the fundamentals prescribed in FM 22-5. The company clerk normally carries the guidon.

45. DRILL ORGANIZATION. a. Platoon. (1) The drill platoon is composed of a platoon headquarters and two, three, or more squads.

(2) Platoon command group comprises platoon commander, platoon sergeant (second in command), platoon guide, and one runner.

(3) The platoon commander may be an officer or noncommissioned officer.

b. Company. The company is composed of a company headquarters and two or more drill platoons. The company command group consists of the company commander, one other officer (if available), the first sergeant, and the guidon. Personnel of company headquarters is formed as or attached to a drill platoon.

c. Battalion. The battalion is composed of three lettered companies and headquarters company. Units of the battalion are arranged in the following order from front to rear or from right to left: Headquarters company, maintenance-of-way company, maintenance-of-equipment company, transportation company, and medical detachment. When the battalion is organized for the operation of electrified lines, it is composed of four lettered companies and the headquarters company. The electric power and transmission company assumes its place in the battalion formation between the transportation company and the medical detachment. When an ambulance train maintenance section and/or ambulance train maintenance crews are attached, they will assume their place in the battalion formation with the medical detachment, both being under the command of the senior officer present for the period of the formation.

46. CLOSE-ORDER DRILL. a. Soldier. (1) All personnel of the battalion receive the individual instruction of a soldier dismounted without arms (FM 22-5).

(2) Personnel of companies whose basic arm is the rifle or carbine will receive instruction of a soldier dismounted with rifle (FM 22-5).

b. Squad. Squad drill is carried out as prescribed for the infantry rifle squad (FM 22-5).

c. Drill platoon. The platoon is drilled as an infantry rifle platoon (FM 22-5). The platoon is the largest unit engaged regularly in drill or extended order. Formations of the platoon are similar to those of the infantry rifle platoon and include line and column of fours, threes, twos, or files.

d. Company. The company drills as an infantry rifle company. The purpose of close-order drill of the company is to permit it to participate in ceremonies. Knowledge of movements, commands for which are described in FM 22-5, is required.

e. Battalion. The battalion does not engage in close-order drill.

47. FORMATIONS. a. General. Formations employed are—

(1) Drill and assembly, used for reveille, retreat, roll call, inspection, and close- or extended-order drill. It is used habitually on company parade and normally precedes formation for drill or ceremonies.

(2) Route march, used on the road.

(3) Inspection, used for careful check of personnel, for detailed inspection of personnel, equipment, and motor transport.

b. Drill and assembly. Elements of the company are arranged from right to left. The various elements form under their leaders. Company headquarters is always on the left. To form the company, see FM 22-5.

c. Route march. (1) For route march companies take up the march formation shown in FM 22-5. The chauffeurs for company trucks, mess sergeant, supply sergeant, cooks, and helpers join the company or battalion vehicles. When the company acts alone it calls upon the headquarters company for an additional truck and one motorcycle with chauffeurs. When entire battalion takes up the march, the company truck and mess sergeant, supply sergeant, and cooks and helpers join headquarters company. The transport section of headquarters company increased by the company trucks is placed under command of an officer designated by the company commander, headquarters company. Individuals of companies designated above with such additional personnel as may be designated by proper authority are assigned to vehicles by the transport section commander.

(2) The march is governed by regulations applicable to the infantry rifle company and the infantry battalion with such modifications as are necessary due to difference in organization.

(3) Order of march of the battalion is prescribed by the battalion commander.

48. INSPECTION.

a. Types. The two types of inspection are—

(1) **MILITARY.** Made for the purpose of determining

condition of personnel, individual equipment, quarters and arms of the organization, and carried on in accordance with provisions of FM 22-5.

(2) **TECHNICAL.** Made for the purpose of improving efficiency of the unit and the individual on railway work, and to insure safe operation. It includes inspection of facilities, of technical qualifications of individuals, of work, and of equipment and material other than individual.

b. When made. (1) When personnel is not engaged upon railway work, inspections normally are held in the company area.

(2) When personnel of the battalion is engaged upon railway work, military inspection is not made at a time or in a way which interferes with maintenance and operation. When made, the formation is prescribed by the local commander, following the general principle that personnel is placed under its work leader and that groups engaged upon different types of work are separated.

(3) Technical inspections are made continuously by unit commanders to maintain the efficiency of their organizations while operating. Methods of making technical inspection are prescribed by the battalion commander in such a way as not to interfere with essential work.

49. CEREMONIES. **a.** Rules governing participation of the battalion in ceremonies are prescribed in FM 22-5.

b. Organizations habitually pass in review in company mass formation or column or columns of threes or fours.

50. EXTENDED ORDER. For general regulations governing extended order, see FM 22-5.

Section X

Combat

51. GENERAL. Railway troops will be used in combat only under the most extraordinary conditions. When the battalion is operating over an area which may be subject to combat, it is normally protected by troops from other arms of the service. When combat does occur in the vicinity of the railway, railway activities may increase in either tonnage, troop movements, or action to save equipment or destroy structures. Railway troops may have to engage hostile aviation, mechanized raiding parties, and parachute troops.

Section XI

Training

52. GENERAL. **a.** The battalion must undertake disciplinary, physical, combat, and technical training.

b. The purpose of disciplinary training is to develop the habit of obedience, to permit participation in ceremonies and inspections, to promote teamwork and morale within the organization, and to develop leadership.

c. The purpose of physical training is to develop the bodies of the individuals so as to enable the organization to accomplish the arduous tasks which it is required to perform in the theater of operations without unduly depleting its strength by sickness. Physical training is included in training programs by unit commanders and includes games as well as calisthenics (FM 21-20).

d. The purpose of combat training is to enable participation in defensive combat and to provide for security.

e. Technical training is all training undertaken for the purpose of qualifying individuals and units in performance of duties relating to maintenance and operation of railways.

53. PRIVATE. The individual soldier must be trained—

a. In military courtesy and discipline, including the basic training of the soldier, guard duty, first-aid, and hygiene.

b. To use the weapon with which armed.

c. To perform duties to which assigned.

d. To execute movements of close order and extended order.

- e. In combat principles.
- f. In scouting and patrolling.

54. NONCOMMISSIONED OFFICER.

a. In addition to the training prescribed for the private, the noncommissioned officer is trained to command.

b. In order to insure prompt and efficient execution of work, responsibility must be delegated to noncommissioned officers. It is impracticable for officers to exercise direct control of work; they can only supervise its execution. Railway operating battalions are mobile units. They must be able to take over immediately the operation and maintenance of a railway. The nature of duties assigned to them requires dispersion of personnel in small detachments over a large area. They are subject to constantly varying conditions due to the fluctuations in tonnage, accident, and enemy destructive activities. Emphasis in training of noncommissioned officers must be placed upon development of leadership, initiative, and a sense of responsibility. The military effectiveness of a railway organization depends primarily upon ability of noncommissioned officers to assume responsibility.

55. COMMISSIONED OFFICER. A unit commander must be trained—

a. In the relation between his unit and other units of the battalion.

b. In powers and limitations of the unit he commands.

c. In means and methods employed in execution of work.

d. To utilize existing subordinate units under their leaders for execution of work.

e. To supervise the work; that is, see that tasks are properly carried out, that correct methods are used, and that supply of materials is maintained.

f. To plan for improvement of activity over which he exercises control.

g. To plan for various conditions under which he may have to operate, bearing in mind that command responsibility should so far as practicable, remain the same.

56. UNIT. A unit must be trained in—

a. Railway work, to execute rapidly and systematically work which may be assigned to it in maintenance and operation of railways.

b. Close- and extended-order drill.

c. Combat principles.

57. METHOD.

a. The method adopted should create a flexible organization capable of operating under varying conditions with maximum speed and efficiency. To attain this end, emphasis must be placed upon disciplinary and command training of groups under their leaders.

b. In order to create a smooth-running organization, the individuals therein must be soldiers and they must be trained to operate as a unit or group.

c. When the unit is not employed on technical work, that is, during mobilization or in rest camps, training is concentrated on—

(1) Military training; duties of the soldier; drill, ceremonies, inspections, combat exercises, and marksmanship.

(2) Care and use of tools assigned to the unit.

(3) Development of specialists or increasing their proficiency by setting up classes under competent instructors for train dispatchers, station agents, telegraph operators, boiler-makers, machinists, electricians, trainmen, enginemen, etc. Attendance at these classes will be required by the specialists concerned and every effort will be made to qualify men for more than one position.

(4) Instruction on rules governing train movement; train dispatchers, conductors, brakemen, switchmen, engineers, firemen, hostlers, station agents, and telegraphers directly concerned with train movements will be required to fill out preliminary rules questionnaire before being permitted to perform any duties in connection with their technical training and will be required to complete qualifying questionnaire on operating manual (TM 55-265) before being qualified and assigned to any of the above positions in the Military Railway Service; other personnel will be required to pass

satisfactory examinations on the rules and regulations governing the duties of their respective positions as shown in maintenance-of-way manual and equipment manual.

d. When the unit is employed on railway work, training emphasis is placed upon development of specialists qualified to perform the work and operate the machines of the unit. This type of training is continuous and is carried on by the apprentice system used on commercial railways. It should not interfere with maintenance and operation of the railway.

e. Individual training should, in general, be conducted by noncommissioned officers. In order to train instructors and certain specialists, schools may be conducted within the battalion. Officers prepare training programs, supervise their execution, and train instructors and certain specialists.

Section XII

Medical Detachment

58. GENERAL. a. The medical detachment must be a flexible organization capable of meeting the varying conditions under which it operates. Distribution of personnel and duties will change with the employment of the battalion (see T/O 8-500, column 27).

b. The detachment must be able to furnish adequate medical aid whether the battalion be operating a railway, engaged in combat, or in a rest camp. When operating a railway, the battalion is scattered over a considerable area, varying in length from 90 to 105 miles. The detachment must take care of the usual sickness, shop, and line accidents. If it is impracticable to take care of isolated detachments, the battalion surgeon will arrange with other nearby medical agencies for such service.

c. The battalion commander designates the location of the battalion dispensary or aid station and local aid posts, if necessary, upon recommendation of the battalion surgeon. On railway work the principal aid points normally will be near the shops.

d. Personnel of the medical detachment must be available at all times to proceed on short notice to the site of a wreck and furnish medical aid.

59. DRILL, CEREMONIES, AND COMBAT. The detachment is handled in accordance with the principles set forth in FM 8-5 with such modifications as may be necessary due to its difference in strength, organization, and employment.

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